What is claimed is:

1. A method of inspecting a continuously moving web, comprising:

imaging a sequential portion of the continuously moving web to provide digital information,

processing the digital information with at least one initial algorithm to identify regions on the web containing anomalies,

extracting identified regions from the digital information, and

analyzing the extracted identified regions with at least one subsequent algorithm to determine which anomalies represent actual defects in the moving web.

2. The method according to claim 1 further comprising storing or buffering the identified regions prior to analyzing.

3. The method according to claim 2 wherein the stored or buffered information is analyzed after the imaging has been performed on the entire web.

4. The method according to claim 1 wherein the initial algorithm comprises thresholding the digital information and forming a blob list.

5. The method according to claim 1 wherein the at least one subsequent algorithm includes neighborhood averaging, neighborhood ranking, contrast expansion, various monadic and dyadic image manipulations, digital filtering, texture analysis, fractal analysis, frequency processing, convolutions, morphological processing, thresholding, connected component analyses, blob processing, blob classifications, or combinations thereof.

6. The method according to claim 1 wherein the continuously moving web is normally unpatterned.

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7. The method according to claim 1 wherein the continuously moving web has a pattern, and wherein the initial algorithm used to process the digital information is capable of distinguishing between regions of the web containing perfect pattern from regions of the web containing pattern and also possible defects.

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8. The method according to claim 1, wherein the at least one subsequent algorithm characterizes at least a portion of the web into quality classifications.

9. A method according to claim 1, wherein the identified regions contain information, as indicated by size, having at least an order of magnitude less than the digital information.

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10. The method according to claim 1, wherein the subsequent algorithm includes a plurality of steps, wherein each of the plurality of steps comprises comparing each anomaly against a combination threshold-pixel size criterion.

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11. The method according to claim 10, wherein an anomaly is identified as an actual defect if any one of the criteria is satisfied.

12. The method according to claim 1, wherein at least some anomalies are reported in real time for process monitoring, process control or both.

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13. A method of inspecting a continuously moving web, comprising:

imaging a sequential portion of the continuously moving optical film web to provide digital information,

25 processing the digital information with an initial algorithm consisting of an intensity threshold followed by defect sorting based on blob size to identify regions on the web containing anomalies,

extracting subimages from the identified regions in the digital information, and

analyzing the extracted anomalies with the following subsequent algorithms to

30 determine which anomalies represent actual defects in the moving web, wherein each of the

subsequent algorithms consists of an intensity threshold followed by defect sorting on blob size such that for each subsequent algorithm, the intensity threshold increases as the minimum blob size decreases.

5   14. A method of inspecting a web, comprising:

imaging a sequential portion of the web to provide digital information,

processing the digital information with at least one initial algorithm to identify regions on the web containing anomalies,

extracting identified regions from the digital information, and

10   analyzing the extracted identified regions with at least one subsequent algorithm to determine which anomalies represent actual defects in the web.

15. An apparatus for inspecting a continuously moving web, comprising:

an imaging device for imaging a sequential portion of the continuously moving web to

15   provide digital information, and

computational equipment for processing the digital information with an initial algorithm to identify regions on the web containing anomalies, then extracting identified regions from the digital information, and then analyzing the extracted identified regions with at least one subsequent algorithm to determine which anomalies represent actual defects in the

20   moving web.

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